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ABSTRACT

This study found no differences in the performance of middle class black and white children on three ability measures. The sample consisted of 15 pairs of black and white middle class children, aged 2.5 to 6.5 years, who attended the same mid-south child development center during 1987-88. Variables on which the children were match-paired were the following: (1) age; (2) race; (3) gender; (4) family income; and (5) parents' education. Children who received special services were not included in the study. The following ability measures were used: (1) the McCarthy Scales of Children's Abilities; (2) the Kaufman Assessment Battery for Children; and (3) the Bracken Basic Concept Scale. Each child was individually tested by a trained examiner. One test was administered per testing period. Preliminary analysis of the data indicated no differences between the scores of black and white children on the tests. One-way ANOVA was used to analyze the data to statistically confirm that no differences exist. Statistical data are included on three tables. A brief bibliography is also included. (FMW)

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Abstract

There is a large body of literature comparing low-income black and white children's performance on ability tests. However, there is a dearth of literature comparing black and white middle class children's performance on ability tests. Thus, the purpose of this study was to examine the relationship between black and white middle class children's performance on three ability measures.

The sample for this study was matched-pairs of black and white middle class children (ages 2.5 to 6.5 yrs.) who attended the same Mid-South child development center during 1987-1988. The children were matched-paired on the following variables: age, race, gender, family income, and family education. Children who received special services were not included in the study. The ability measures used were the McCarthy Scales of Children's Abilities, the Kaufman Assessment Battery for Children, and the Bracken Basic Concept Scale. Each child was individually tested by a trained examiner. One test was administered per testing period.

Preliminary analysis of the data indicated no differences between the scores of black and white children on the tests. One-way ANOVA was used to analyze the data to statistically confirm that no differences exist.

As affirmative action programs become successful more blacks have entered the middle class. How middle class life has affectd the black family is largely unknown. There is a dearth of literature comparing black and white middle class families in general and children's performance on ability tests in particular. Most studies compare black and white children's performance on ability tests without regard to the socio-ecomomic class of the two groups (Bracken,1984; Jensen,1984; Jones, 1984 & Kaufman & Kaufman, 1973). Typically, these studies show that white children score higher on ability tests than their black counterparts. Since socio-ecomomic status is not controlled, these findings reveal little about the relationship between middle class black and white children on ability measures. Thus, the purpose of this study was to examine the relationship between black and white middle class children's performance on three ability measures.

The three ability measures used to compare the performance of black and white middle class children were the McCarthy Scales of Children's Abilities, Kaufman Assessment Battery for Children (K-ABC), and the Bracken Basic Concept Scale (BBCS). The McCarthy and the K-ABC are considered to be less culturally biased than other standard tests of intelligence and, therefore, show a smaller average difference between black and white children. According to Jensen (1984), the diminished black-white difference on the K-ABC results from psychometric and statistical artifacts:

lower g loadings of the mental processing scales and greater heterogeneity of the standardization sample, which causes mean group differences to be smaller when they are expressed in standard score units. The K-ABC has shown a small (one half standard deviation) difference between blacks and whites. Studies comparing black and white children using the McCarthy have shown that for the age levels 2.5 to 3.5 and 4 to 5.5 there were no significant differences between the two groups, but as children got older- 6.5 to 8.5- the differences were significant in all areas except motor. Although there were no significant differences, white children had slightly higher mean scores on all areas except motor skills at ages 4 to 5.5. Bracken (1987) reported that there was a significant difference on all areas of the BBCS between the two groups in favor of whites. The BBCS is a verbally-oriented achievement test and probably possesses a relatively high g loading which could account for some of the differences found in black and white children. The studies reported above used random samples in their population.

Using these three tests to measure the black and white differences on ability should give some indication if a difference exist between the two middle class groups. One would expect from the population norms to find no significant difference on the McCarthy, some possible differences on the K-ABC, and a significant difference on the BBCS.

SUBJECTS

The subjects in this study included 15 pairs of black and white middle class children matched according to age, gender, and parents' education (McCarthy) and 11 pairs matched for the K-ABC and BBCS. All children had parents who were considered to be professionals. The subjects ranged in age from 2.5 to 6.5 and included both males and females. The sample for the study was selected from a group of 95 children who attended a Mid-South university lab school during the 1987/1988 acadamic year. Children with handicapping conditions were not included in this study.

INSTRUMENTS

The subjects were administered three ability tests: McCarthy, K-ABC, and BBCS. The McCarthy was administered during the fall of 1987 and the K-ABC and the BBCS were given during the spring of 1988.

The McCarthy is a nationally norm-referenced test which measures the general intellectual level of children ages 2.5 to 8.5. It also identifies children's strengths and weaknesses in important abilities. Scores are obtained in the following areas: general composite (based on mean score of 100 and a standard deviation of 16) and verbal, perception, quantitative, memory, and motor (based on mean score of 50 and a standard deviation of 10).

The K-ABC assesses the intelligence and achievement of 2.5 to 12.5-year-old children. The Mental Processing Scales (which are the tests items administered to the subjects in this study), measure the child's ability to solve problems sequentially and simultaneously with emphasis on the process used to produce correct solutions, not on the specific content of the items. The composite score has a mean of 100 and a standard deviation of 15. The subtests have a mean score of 10 and a standard deviation of 3. The scales provide scores in the following areas: Magic Window, Face Recognition, Hand Movements, Gestalt Closure, Number Recall, Triangles, Word Order, Matrix Analogies, Spatial Memory, and Photo Series. The last three categories were not included in this study because there were not enough subjects who completed this section of the test.

The BBCS is a measure of a child's knowledge of basic concepts in eleven specific content areas: colors, letter identification, numbers/counting, comparisons, shape (all of these subtests comprise the SRC-School Readiness Composite), direction/position, social/emotional, size, texture/material, quantity, and time/sequence. The test presents the concepts in sentence format and requires the comprehension of the relationship between the concept in question and the other related words in the sentence. It is appropriate for preschool and primary children ages 2.5 through 7.11 months. The total score is based on a mean score of 100 and a standard deviation of 15. Individual

subtests scores are based on a mean score of 10 and a standard deviation of 3.

PROCEDURE

All three ability tests were administered to the subjects by examiners who had previous testing experience with young children. Each child was tested individually and one test was administered per testing period. Testing occurred at the child care center during regualar operating hours.

RESULTS AND DISCUSSION

One-way ANOVA were used to analyze the data. No significant differences (with one exception) were found on the three ability measures between black and white middle class children ages 2.5 to 6.5. On the McCarthy, white children had higher mean scores than blacks on all areas except motor skills, but none of the differences were significant at the .05 level (see Table 1). On the K-ABC, white children had higher mean scores on all subtests except the magic window, face recognition, and Gestalt close subtests, but none of the subtests were significant at the .05 level (see Table 2). White children had higher mean scores on all subtests of the BBCS except size. A significant difference was found between the two groups on the total score (.034) of the BBCS at the .05 level of significance (see Table 3). This difference was not unexpected since previous studies by

Bracken had shown much greater differences between sample groups of black and white children on the BBCS.

TABLE 1
Means and Obtained F Values for Matched Pairs of Blacks and Whites on McCarthy Scales of Children's Abilities

	Blacks n=15		Whites n=15		
Variable	Mean	SD	Mean	SD	F
Verbal	57.53	7.40	62.73	7.46	.065
Perception	58.27	9.87	61.80	9.16	.318
Quantative	57.13	8.41	59.33	8.62	.485
Memory	54.27	7.82	57.67	6.26	.200
Motor	57.53	6.47	56.67	4.39	.671
COMPOSITE	114.40	11.48	121.47	9.25	.099

$p \leq .05$.

TABLE 2
Means and Obtained F Values for Matched Pairs of Blacks and Whites on Kaufman Assessment Battery for Children

	Blacks n=11		Whites n=11		
Variable	Mean	SD	Mean	SD	F
Magic Window	10.67	3.61	10.60	3.71	.431
Face Recognition	10.88	1.61	9.67	2.83	.163
Hand Movement	10.27	1.85	10.82	3.06	.814
Gestalt Close	12.36	2.91	11.27	3.03	.546
Number Recall	10.91	2.07	11.73	4.41	.625
Triangle	12.38	2.26	14.60	2.40	.063
Word Order	10.38	2.56	12.89	3.02	.103
TOTAL	108.09	10.15	112.91	15.40	.315

$p \leq .05$

TABLE 3
Means and Obtained F Values for Matched Pairs of Blacks and Whites on Bracken Basic Concept Scale

	Blacks n=11		Whites n=11		
Variable	Mean	SD	Mean	SD	F
SRC	11.09	1.92	12.36	2.98	.247
Direction/Position	10.82	1.72	12.36	2.20	.082
Social/Emotional	10.45	2.16	11.64	2.84	.285
Size	11.55	2.66	9.82	3.46	.204
Texture/Material	10.64	2.34	11.46	3.14	.496
Quantity	9.73	2.10	11.91	3.08	.067
Time/Sequence	10.18	1.66	11.46	2.84	.214
TOTAL	103.18	12.72	112.92	7.69	.034

$p \leq .05$

In all three tests the average mean score for each group was higher than the national norm on the tests. All subtests on the measures also produced somewhat higher scores than the national norms with the exception of face recognition (9.67-whites) on the K-ABC and quantity (9.73-blacks) and size (9.82-whites) on the BBCS.

Even though the sample for this study was small, the evidence suggest that there is not a significant difference between black and white middle class children (ages 2.5 to 6.5) on the McCarthy, K-ABC, or the BBCS (with the noted exception) and that both groups scored higher than the national norm on all three measures.

It would be interesting to extend this study to older children. The literature suggests that as black and white

children get older, their performance gap increases, but would this same idea hold true for the middle class black and white children?

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